

REMARKS

Reconsideration of the rejection of Claims 2, 3, 5-7 and 11-13 is requested in light of the above amendments.

Reconsideration of the rejections of Claims 2, 9 and 12 as being anticipated by Takamoto et al. under 35 U.S.C. § 102(b), of Claims 5, 6 and 13 as being unpatentable over Takamoto et al. in view of Hotta under 35 U.S.C. § 103(a), of Claim 7 as being unpatentable over Takamoto et al. in view of Hotta et al. and Takahashi et al. under 35 U.S.C. § 103(a) and of Claim 8 as being unpatentable over Takamoto et al. in view of Hotta and Siepkes under 35 U.S.C. § 103(a), each of which is traversed, is requested.

The above claims define an electric vehicle and a method for keeping the vehicle at a stopped position in which:

- (A) a position control apparatus keeps the vehicle body at a stopped position by using rotating torque of an electric motor when a brake pedal is depressed; and
- (B) the rotating torque is calculated corresponding to an amount of depression of the brake pedal, with the vehicle body kept at the stopped position by generating a calculated rotating torque in the electric motor.

The present invention makes possible, irrespective of the accelerator pedal, the vehicle being prevented from slipping down a slope in case the accelerator pedal treading operation is changed from a state where the brake pedal is treaded at the slope during the vehicle stopped condition. In addition, since a current is required to flow only a short time in the motor winding to keep

the vehicle stopped for changing-over in treading from the brake pedal to the accelerator pedal, the consumption of electrical power can be minimized.

The Takamoto et al. patent does not suggest such an approach. Instead, there the torque instruction value R , which is an output of the flow chart of Fig. 3(c), is outputted as a control signal when the position selection signal S_p is turned off at the switching circuit 314 in the motor control circuit shown in Fig. 4.

Takamoto et al. does not suggest a minimum torque for use in controlling a position during a positional controlling operation. The resultant reduced power consumption is not remotely suggested in the cited prior art, starting with the Takamoto et al. patent.

In the Takamoto et al patent, the stopping torque instruction τ_p is equal to the torque τ_o when position control is carried out as seen in Fig. 2, at SELECTION 314 which shows that, when S_p selects τ_p , the output SELECTION 314 is τ_o . The Office Action states that the specification of this patent refers to the stopping torque as τ_p . That is incorrect in that τ_p and τ_o are the same at position control. As seen in Fig. 2 of the present application, the TORQUE COMMAND is restricted by the output of the TORQUE DECREASE 25. This approach reduces the need for unnecessary current.

Nor can applicants agree that the Takamoto et al. patent alone or in combination with any of the other cited prior art even suggests the first means and the function thereof recited in amended Claim 12. The same is true with regard to the features of Claims 3, 10, and 11.

With respect to Claims 5, 6 and 13, we note that these claims define the "preset maximum holding time in what occurs after it elapses. In addition, we

note that Claim 13 achieves reduced energy consumption by decreasing motor torque when an accelerator pedal and a brake pedal of said electric vehicle are not operated while the present maximum holding time elapses. The Hotta patent teaches only that a vehicle motor control system in which the current supplied to the motor is decreased after predetermined time for driving degradation of or damage to the switching transistors. This patent does not even suggest preventing a vehicle from slipping down on a slope as its real object, and the results are quite different from the present invention. In this connection, the calculated time period in Hotta as referenced in the Office Action is only the time for avoiding damage to the inverter. The time period employed in the present invention is for reducing energy consumption. Claim 7 should thus be patentable as well.

Finally with regard to Claim 8, applicants submit that the aforementioned patent, with or without the hypothetical modification of Siepker, would not have led one of ordinary skill to an electric vehicle in which the brake pedal is operable to keep the vehicle body at the stopped position by the oil hydraulic pressure brake device after said preset period has elapsed.

Accordingly, early and favorable action on the above claims is earnestly solicited.

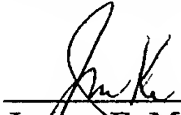
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

please charge any deficiency in fees or credit any overpayments to Deposit
Account No. 05-1323 (Docket #381NT/44743TCO).

Respectfully submitted,

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